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Cholera Morbus #3

Green box

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Cholera Morbus.

This disease is defined to be a discharge of bile by vomiting and purging, frequent in their occurrence, often very violent and accompanied by griping.

It prevails more generally in high ranges of temperature. Hence it is endemial to tropical climates and here its influence is widely felt and sometimes its devastations are truely frightful. Cases of it occur at all seasons of the year; but the warmest weather is found to be much more favourable to its production. In temperate climates it seldom or never occurs except in summer and the beginning of autumn, August and September in which months the thermometer generally indicates the greatest degree of heat.

It has generally been supposed by physicians, both ancient and modern, that bile is the proximate cause of this disease. The great heat of the weather acting upon the hepatic system as a stimulant, the secretion of bile is morbidly increased and rendered more acrid and thus both acting together give rise to the various phenomena of the disease.

From circumstances previously related Cullen says "It is, I think, very evident that this disease is the effect of a

warm atmosphere, producing some change in the state of the bile in the human body: and the change may consist, either in the matter of the bile being rendered more acrid, and therefore fitted to excite a more copious secretion; or in the same matter, its being prepared to pass off in larger quantity than usual. But this opinion has of late years been controverted and in the course of this dissertation I hope to show justly.

Obstructed perspiration has with more propriety been considered as a cause of this disease. The author above cited again says "It has been remarked, that in warm climates and seasons, after extremely hot and dry weather, a fall of rain cooling the atmosphere seems especially to bring on this disease." "Indeed! (remarks a late writer although in reference to a another author) Can a fall of rain be supposed to increase the secretion of bile? Cullen again, however, subjoins, "And it is very probable that an obstructed perspiration may have also a share in this, though it is also certain that the disease does appear, when no change in the temperature of the air, nor any application of cold has been observed. Here what is conceived to be a probable cause is, no doubt, in very many instances the

real one. Cullen again says "It is possible, that in some cases, the heat of the season may give only a predisposition, and that the disease may be excited by certain ingesta or other causes". The late writer above quoted again asks the question "Can these causes, I say again, be considered as increasing the secretion of bile? Cullen however observes "But it is equally certain, that the disease has occurred without any previous change or errour, either in diet, or in the manner of life, that could be observed.

Dr Caldwell in his notes on Cullen observes upon some of the above remarks that, "The appearance of Cholera, independently of improper exposure, or some impropriety in diet or drink, is a rare occurrence" and that, "It is always practicable to derive the disease from some exciting cause".

But to return to obstructed perspiration. The surface of the body being suddenly acted upon by cold becomes constricted and the capillaries before distended are now rendered flaccid, and the blood that was floating upon the surface is driven from it and internal congestion of the viscera takes place and morbid impressions are propagated from one to the other.

Certain passions of the mind produce similar effects. That these have great influence and sometimes a very deleterious one upon the body has been observed by those who have paid the slightest attention to the causes of disease. Every one must have occasionally observed the shrunken features and pallid countenances of those who have been acted upon by fear. Anger likewise, though not like fear immediately depressing to the system, is yet productive of much mischief. Its morbid impressions are variously made and doubtless, in some instances, give rise to the disease of which we are treating, although such occurrences may perhaps be rare.

Certain ingesta have been assigned as causes of this disease and no doubt truly. Vegetables which produce flatulency, unripe fruits and acrid substances of various kinds, cold water taken into the stomach when the body is heated and fatigued together with intemperance in drinking and debauchery in eating have caused the disorder as every one must have more or less witnessed.

This disease attacks persons of all ages and temperaments, the strong and robust as well as those of relaxed fi=

bres, although the young and vigorous may perhaps be oftener selected as its victims.

The diagnostic symptoms of this disease may be readily known from those of some other diseases to which it may seem to have some resemblance. The stools in cholera consist, for the most part of pure bile while in dysentery they are mucous and bloody, the feces being retained untill evacuated by medicine. In diarrhoea the stools consist of the natural feces though much more liquid than usual. It may be known from cholic by the total absence of constipation.

The prognosis will be more or less favourable according to the mildness or violence of the attack. If it seems to yield pretty readily to the remedies employed our opinion must be favourable.

The disease having occurred the symptoms are as follows. It is sudden in its attack and sometimes unaccompanied with any symptoms of approaching disorder or that may serve as a warning to the patient of the danger to be apprehended. Usually, however, a griping pain, flatulency, distention and much gastric distress usher in the complaint. Presently purging commences

and the bowels are emptied of their contents which are thin and watery. Very soon nausea supervenes and vomiting takes place of the contents of the stomach often violent and very distressing. These symptoms alternate with each other or occur at the same time. In a short time the matter discharged upwards and downwards consists of pure bile. The griping increases and spasms are communicated to the abdominal muscles and to those of the lower extremities. The patient becomes much exhausted. His respiration is laborious; thirst, heat and pain in the stomach cause him much distress. The pulse is weak and frequent. These symptoms continue for a day or two and if the patient is disposed to sleep they gradually and spontaneously subside or are arrested by medicine the former, however, is a very rare occurrence. This is the mildest form of the disease. But cases do occur which set at defiance every remedy though directed by the soundest judgment and the best medical skill. All the symptoms just mentioned are aggravated. Great debility and prostration of strength come on approaching to syncope. The respiration is extremely hurried and laborious with heaving of the shoulders. The pain in the stomach, heat

and thirst are much increased. The spasmodic contractions of the muscles of the abdomen and lower extremities are very violent. The features are pallid and shrunk. The extremities become cold and are bedewed with a cold clammy sweat. Singultus takes place and the pulse which was at first feeble and frequent becomes still more so, untill completely exhausted the patient sinks and death terminates his sufferings. This event sometimes takes place in twenty four hours and sometimes in a much shorter period.

Cases, however, which run their course so speedily seldom occur in our climate; but they are frequent in the West and particularly in the East Indies where the disease has of late prevailed to a great extent, depopulating, in some instances whole villages, of which I had an opportunity of learning while in that country.

Having related the symptoms of this disease I shall now revert to what has generally been considered as its proximate cause viz the secretion of bile and shall endeavour to expose the fallacy of this opinion.

Nor is it an idle speculation to endeavour to deter=

mine this point: because our pathological views certainly have great influence on practice. It is the only sure foundation on which we can erect an enlightened and successful practice.

It is stated by writers on this disease that the first discharges per orem et per anum consist of the contents of the stomach and intestines. Now if the disease depended upon a preternatural quantity or acrimony of the bile we assuredly should expect to see it flow upon the first discharges. But so far is this from being the case that the very persons who declare it does, declare that the stools are at first thin and watery and that what is vomited up consists of the contents of the stomach imperfectly digested. It is not untill the disease has continued for some time that pure bile is evacuated and then is accused of being the cause of all the mischief produced.

It is stated by a writer on the diseases of India that in the worst cases which he saw and which terminated fatally, that there was not the least appearance of bile and that whenever it did occur he hailed it as a favourable symptom. Hence we infer that instead of its being the cause it is merely an effect, "Instead of the original disease it is only a symptom."

That the bile, as is asserted, is more acrid than usual can hardly be conceived. It is certainly reasonable to suppose that as it is secreted in larger quantities than natural and passes in a much shorter time from the system it would be less acrid and therefore unproductive of those mischievous effects which are ascribed to it. We might, with the same propriety, say that the urine, which, in diabetes, is secreted in a very unusual quantity, is at the same time possessed of acrid qualities and is therefore the cause of the disease, or that the phlegm and mucus which are so abundantly expectorated in some diseases of the pulmonary organs are very acrid and therefore considered as causing all the distress which the patient experiences. Absurd as this appears it is not more so than to say that bile is the cause of Cholera Morbus. It is as much the effect of the disease as urine is of diabetes or the discharge of mucus is of inflamation.

The griping, pain and thirst which the patient experiences in this disease can not be attributed to the bile. They are the usual accompaniments of inflamation and are always more or less present in the bowel affections according to the degree of the inflamation and take place where we have no reason to suspect

the presence of bile.

That a high range of temperature acts upon the liver by stimulating it to an increased secretion of bile is allowed by universal consent. And that the system is unusually excited is equally true. And therefore more easily affected by external impressions.

It is acknowledged by writers upon this subject that the disease is more apt to prevail upon sudden variations of weather - such as a fall of rain cooling the atmosphere or alternate changes from heat to cold unaccompanied by moisture. And this, no doubt in a great majority of cases, is the cause of the disease. To atmospherical vicissitudes then we are to look for the great cause of this disease.

The body being heated and covered by perspiration if suddenly exposed to cold becomes constricted. A violent oscillation of blood takes place internally and a morbid impression being made upon the surface is propagated to the viscera particularly to the liver which is struck torpid, while the stomach and intestines are rendered, by the accumulation of blood, extremely irritable and their contents are discharged and soon bile makes its appearance. Here then at the very onset of the disease nature endeavours to

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effect a cure; for vomiting is well known to tranquilize the excitability and to determine the blood to the surface and thus restore the healthy action. By this cause then, as well as the violence which is done in the act of vomiting the liver is roused into action and all at once an immense quantity of bile is poured out into the stomach and intestines and is discharged per orem et per anum. 05.

Here then what is supposed to be the cause of the derangement which takes place is in reality no other than an effect, or as a late writer observes, "Thus we see that the very last link in the chain of effects, and that too a salutary one, has, for ages, been set down as the cause of Cholera", "increased secretion of bile.

From this view of the subject, in the management of the disease, there are two indications to be attended to, to restore the healthy action of the skin and to allay the morbid excitement and irritability.

The practice which has, for a long time and very generally, obtained of administering tepid and diluent beverages in the commencement of this disease, appears to be inert if not altogether useless, except indeed by distending the stomach they, in some degree, lessen the violence of vomiting. It is merely prescribing for

a symptom while all our efforts should be directed to the removal of the cause. It is endeavouring to strengthen and support a withering limb, while we are regardless of the disease which is preying upon the roots and trunk of the tree, which alone is the cause of the decay. Besides we are wasting time which is so very precious in this disease and which should be employed in using the most active remedies.

Bleeding in the milder forms of this disease and where the strength of the patient is not greatly reduced may be useful, but in the generality of these cases it may, probably, be dispensed with, the disease giving way to other remedies. But where the disease, in its commencement and progress, is very violent, attended with great depression of strength approaching to syncope and where the pulse is weak and frequent and where we have every probable reason to conclude that the system of the patient can not long sustain the violence of the shock, it is totally inadmissible.

Emetics in this disease can not be considered as safe or useful and this is the opinion of those who have had the most experience in it. The vomiting which spontaneously occurs being sufficient for the necessary evacuation and more than this is dangerous. It would be only adding fuel to the flame which is al=

ready consuming the patient.

In order to effect the first indication we should endeavour to restore the equilibrium in the circulation and thus reduce morbid excitement. To do this nothing is more effectual than the warm bath. It invites the blood to the surface, equalises the temperature and sometimes puts an entire stop to the vomiting. To fulfil the same indication, after the patient is removed from the bath hot bricks and bottles filled with hot water should be applied to the extremities and trunk and to promote a glow on the surface a decoction of the capsicum annuum in spirits or spirits of turpentine and cantharides may be employed, rubbing the body of the patient with them. Sinapisms to the feet may also be useful.

But when the disease is not checked by these remedies we must resort to all those medicines which are calculated to allay irritation. To fulfil this second indication various remedies have been employed and to answer this purpose nothing is more effectual than a combination of opium and calomel. Two or three grains of the former united to ten of the latter may be given at a dose. Its operation is two-fold, to allay present irritation and to remove any offending matter that is calculated to keep it up.

If it remains upon the stomach, we may, after waiting a proper time, give a dose of epsom salts to promote its operation. Sometimes these means alone will subdue the disease. But in others so great is the irritation of the stomach that every thing given by the mouth is rejected. Here then we must have recourse to those means which are employed to restrain vomiting. Anodyne injections are usefully and frequently very effectually employed to allay the irritability of the alimentary canal. Give a drachm or two of laudanum every two or three hours according to the urgency of the symptoms. Concurring to the same end an opium plaster over the epigastric region will be found useful or cloths wrung out of a strong decoction of cloves. At the same time that we are using these external applications we should employ the most active internal remedies. Lime water and milk, a table spoonful of each may be given every ten minutes, or a little mint tea will be found serviceable. But if the vomiting continue obstinate we must employ more powerful means. Fifty to a hundred drops of laudanum with an equal number of peppermint in a half of a wine glass full of brandy diluted with a little water may be given and if rejected repeat it again. The effervescing draught with

laudanum given after each vomiting will sometimes be found beneficial. The spirits of turpentine so advantageous in many of the diseases of the alimentary canal might, perhaps, be of service in this complaint. If, however, all these means should fail in effectually stopping the progress of the disease we should without delay apply a blister over the epigastrium. If we happily succeed in arresting the vomiting then we may recur again to the combination above mentioned in order to discharge from the bowels every thing that may have a tendency to protract the disease.

To prevent a relapse it is necessary to continue the opium for a few days, at least, to keep down irritation, taking care in the mean time to keep the bowels in a soluble condition.

The diet of the patient should be strictly guarded. It should be light and easily digested. Essence of beef, beef tea, chicken broth, animal jelly and soft boiled eggs answer this purpose very well and at the same time serve to strengthen the system. Vegetables of every kind should be totally prohibited as they are liable to become acescent and might renew the disease. Tea coffee and brandy considerably dilated with water may be given to him as drinks. To remove the debility and impart tone to the system the vege=